

# F-18 HORNET

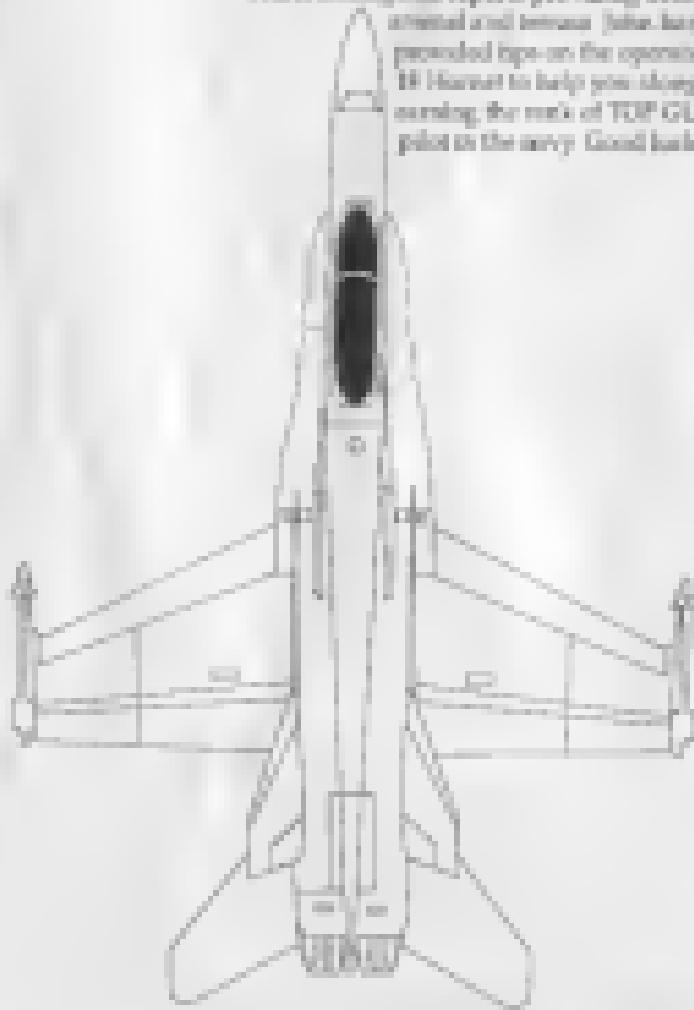


Flight Manual



Welcome to the Atari 7800™ version of F/A-18 Hornet™. Designer John Van Hyken has incorporated all the challenges of authentic fighter jet operations into this compelling game. You'll need all the skills of a Top Gun pilot to successfully complete each of the four missions. The first mission is a training run through the Chaco Lake Naval Weapons Station in the Mojave Desert. Then you're sent across the globe to carry out dangerous assignments in hostile territory. In this manual you'll find everything you need to get you started: mission objectives, aerial maps, and Top Secret intelligence reports providing details of enemy aircraft and terrain features.

provided tips on the operation of the F/A-18 Hornet to help you along your way to becoming the next of TOP GUN, the best pilot in the navy. Good luck!



# INTRODUCTION TO THE ATARI 7800™ VERSION OF F-18 HORNET™

F-18 Hornet™ is a one-player fighter simulator in which the player pilots a Navy F-18/A jet through a series of simulated combat situations involving carrier takeoffs and landings, bombing, dogfights and air combat.

In each of four missions, you are confronted with a variety of opponents and must perform a series of combat objectives in order to achieve top Naval Aviator rank. Prior to takeoff, you are given flight orders from the appropriate Command HQ. Depending on where in the world the mission is flown, after receiving your orders, you must successfully take off, fly the complete mission (including completion of your primary objective (bombing enemy HQ), dropping supplies etc) and finally land your F-18/A at the designated primary landing site. After completing the mission by landing, if successfully, you are ranked according to your performance in flying the aircraft, defeating enemy opposition and completing the primary mission objective.

## To Begin

- 1) With power off, insert the F-18 Hornet™ cartridge into your Atari 7800™ game system according to the manufacturer's instructions.
- 2) Plug your 7800™ joystick into port labeled "left controller".
- 3) Turn power on.
- 4) Press R/C/S/T to begin the game (at any point during the game, press R/C/S/T to return again).



## Start

The title page showing the P-51A flightplan should first appear on the screen. Push the left button on the joystick control to advance to the select mode. A map-of-the-world will appear, and below, instructions to select a mission. Use the joystick to select a mission and press the left joystick button to start it. Keep pressing the joystick forward to read the complete mission orders. To bypass the orders, press the left joystick button.

## Controls

P-51 Hunter™ uses both console and joystick control. It assumes your joystick is plugged into the left-controller input of your Atari 7800™. Note you must route Atari 7800™ joystick incorporating left-left and right-right.

### Console:

Rough-	Start game.
Select	Landing gear up/down.
Pause-	Pause game.
Right difficulty	Spas.
Left difficulty	Drop payload.

### Joystick:

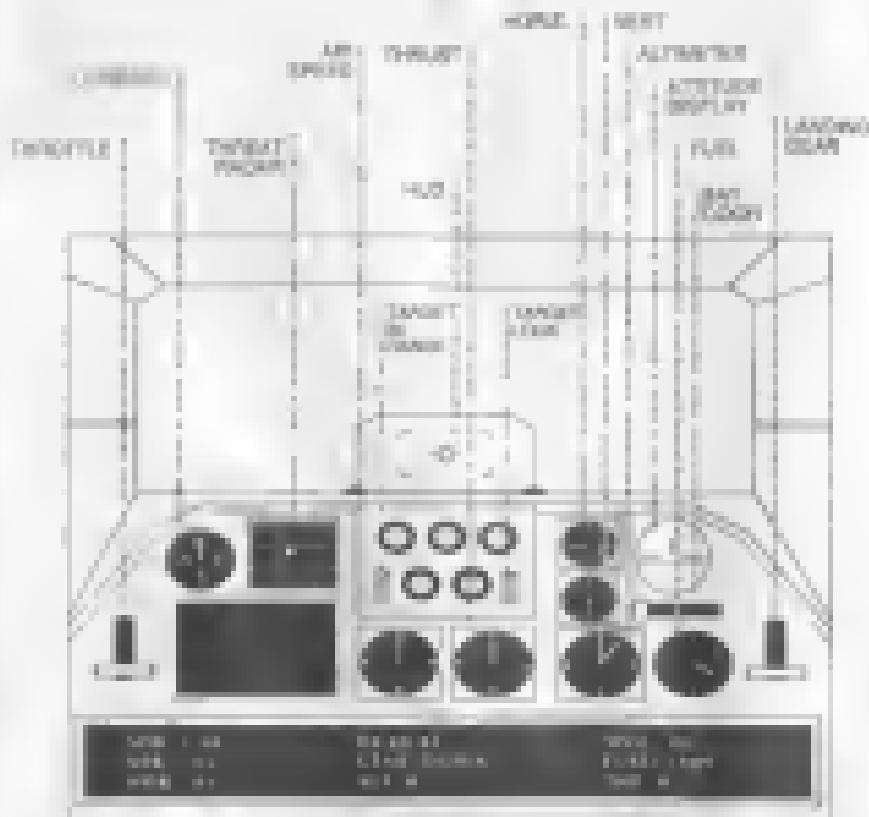
An easy way to remember how the joystick works is to think of it as slightly pulling the left joystick is pressed and as a straight pole when the left button is not pressed.

#### Left button off:

Forward-	Start engine and increases throttle whether flying or on the ground.
Back	Decreases throttle when flying and reverses thrust if you're on the ground (useful for landing).

#### Left button on:

Left	Moves jet left.
Right	Moves jet right.
Forward-	Moves forward if landing.
Back	Dives if flying.
Right Button	Tosses jet around if it is on the ground.
	Climbs if flying.
	Fires missile.



## Cockpit Control Panel

The aircraft cockpit includes all instrumentation actually found in the F-117A fighter aircraft. It includes Altimeter, Air Speed Indicator, Horizontal and Vertical Indicators, Fuel Gauge, Engine Thrust Gauges, Missile Availability and Thrust Radar. All instrumentation is rendered both graphically - gauge dials with moving needles - and digitally at the bottom of the screen. Cockpit levers indicate the condition of the landing gear (down or retracted), throttle and boost radio. The pilot can even spin if the aircraft is severely damaged by enemy fire.

The primary aiming device is a HUD (Head Up Display) projected onto a transparent glass plate mounted over the cockpit. A Fire Control Computer alerts the player through two red/orange lamps when a target is in firing range and when a missile lock has been achieved (the missile is on target under the aircraft's nose, the target).

The digital instrument display is arranged in three columns at the bottom of the screen.

#### **Left column:**

SPD - indicates the air speed (measured in mach) of the aircraft

VASC - indicates, in degrees, the vertical angle of the aircraft.

HORI - indicates the aircraft's horizontal angle

#### **Middle column:**

ATL TIME is a digital clock which measures elapsed mission time.

GEAR indicates status of the aircraft landing gear (up or down).

ALT indicates the altitude, measured in feet, at which the aircraft is flying.

#### **Right column:**

JETFL. - missile probability, indicates the number of missiles available on the aircraft.

FUEL shows the amount of remaining fuel.

THR - Engine Thrust Gauge, measured by percentage of the aircraft's total engine thrust capability.

Each digital readout has a corresponding dial on the analog instrument panel (see cockpit diagram). If the aircraft is damaged by enemy fire the digital display is rendered useless, but the P-MI/A can still be flown by using the cockpit instruments. To learn the flying method, you should study the diagram and note the relative positions of the instruments while flying an unengaged jet.

The THREAT RADAR screen, located next to the compass on the upper-left of the control panel, indicates the position of approaching ground and air threats well before they are within visible range.

#### **Taxiing:**

When the aircraft is on the ground you can taxi by pushing the joystick in the desired direction. Tap the joystick back to turn the plane around.

Note: the tax road offers the only way to turn around and fly back to where you came from.

#### **Take off:**

To take off from a runway hold down the left button and push the joystick forward. This will increase your thrust. When your speed gets greater than mach 0.32 release the button and pull back on the joystick. Once airborne you can control your altitude, direction and speed with the joystick.

Most remember to have enough room on the runway for the length to get airborne.

## Landing gear:

Your landing gear goes up automatically after take off. To put it down again press the select key. Note if you put your landing gear up/bent on the ground you will damage the wings.

## Landing:

To land you must drop your thrust to 20% and get down your landing gear. Begin your descent by pushing the joystick forward. Your vertical attack angle should be -3.0 to -5.0, your horizontal attack angle should be -3.0 and your ailerons should be less than 0.40 rads. Once on the ground hold down on the left button and pull back on the joystick to throttle down your engine. When your thrust reaches zero the engine will go into reverse. This allows you to come to a complete stop. Note: you cannot land on water or in rough landing terrain.

## Aircraft Carrier:

When taking off from an aircraft carrier land you are landed onto the catapult at the back of the deck you must increase your thrust to 90% in order to be catapulted successfully from the carrier.

If you land on the 'T' at the back of an aircraft carrier the F/A's armour health will match the carrier's health and drop gear automatically. At this point decrease your thrust (RPM) by 8% to shut down the engine. Moving the joystick releases the hook. It is also possible to land successfully without hitting the cable. To do this you must stop as quickly as possible as your plane will fall off the front of the carrier. To take off again you must turn around by pulling back on the joystick and move up to the back of the carrier (which will allow smooth take off most) if you move into the 'T' on the back of the carrier a sound will indicate that you are landed onto the catapult for take off. Note: slow yourself down well before reaching the aircraft carrier.

## Weapons:

Up to four missiles pack the right joystick fire button. You take off with a total of 10 missiles for each mission. Targets are tanks, jets and helicopters. Destroying all targets increases your ranking. However, if you miss (missed) colliding with the targets over this will damage your aircraft. Your radar display shows a long range view of approaching targets (see diagram). When a target is in range the left corner light of the panel (see diagram) will blink. When the target is "locked" by computer the right light will blink.

Note: If there moving ground targets you can either land or fly in the direction they are moving.

## **Refueling:**

To refuel you must land at designated fueling areas, as marked on the mission maps. Once your aircraft comes to a complete stop, refueling begins. When you are completely refueled the aircraft enters the fuel mode.

Note: There is no limit to the number of times you can refuel.

## **Payloads:**

Your P-51 will be carrying either supply cargo or bombs, depending on the mission. Dropping the payload is accomplished by using the left difficulty switch on the control stick. Throw the switch when you are directly over the target area. If you hit the target you will either have the load bombs drop or see the flash of an explosion (bombs drop). This will not happen if you miss. Note, if you drop a bomb while in the ground you will blow yourself up!

## **Ejecting:**

Throwing the right difficulty switch ejects you from the aircraft. You will save yourself by parachuting safely to the ground. This should only be done when you have no chance of surviving a crash landing. Ejecting from a burning aircraft will increase your rank since the plane may not be pilot-supported.

Note: ejecting while on the ground does not allow enough time for your parachute to open, consequently you will be killed.

## **Ranking:**

Your gold rating, with each mission. Mission #1 is a training mission requiring that you fly to a designated zone while destroying ground targets. The more complex missions have refueling rates and drop rates where you must drop your payload bombs or supplies within a designated area.

Your score is based on the following six variables:

STATUS - whether you've completed the mission.

LEVELS - how many targets you've destroyed and whether you successfully dropped your payload.

COURAGE - whether you've flown difficult maneuvers.

CRAFT - the condition of your jet at the end of the mission.

PILOT - pilot's position at the end of the mission.

LAZINESS - if you've performed a vertical landing on a corner deck.

The above information is compiled to determine your mission rank. An increased level is available if you press the joystick forward during the ranking mode of the game. The possible ranks are as follows:

**ANFO** - Armed Without Official License

**SHARO** - Responsible for maintaining the deck of the aircraft-carrier

**CADPT** - An officer in training

**ENGNR** - The lowest ranking navy officer

**LIEUTENANT** - A medium ranking navy officer

**CAPTAIN** - A high ranking navy officer

**ACE** - One of the navy's best pilots

**TOP-GUN** - The best navy pilot achieved by getting "ACE" on all 4 missions sequentially!

### **Special Hints**

Use the Intelligence Reports to learn of general situations of the carrier deck, bridges, hangars, etc. If you know the attack you can plan, you will fly well before you approach the site.

If you attain a target or landing area you can turn around. To do this, land at the next safe area and come to a complete stop. Pull back on the joystick to full rudder, then take off again. You will now be flying back to the site.

If you are damaged often, your windshield will crack and your computer (Digital) display will no longer work. If this happens, you must fly by instruments alone, no display. To learn this flying method, study the diagrams and note the relative positions of the instruments while flying in undamaged jet. Learning this method allows you to continue your quest for "Top-Gun" or any other task without restarting the game. Flying a damaged jet does not affect your ranking!

When destroying an enemy plane or helicopter immediately move out of its path after firing missiles so as not to get hit by debris or an enemy shell.

If you are damaged from or run out of fuel, you lose most of your ship's controls. At this point it is still possible to land by holding back on the joystick. This controls your fall to a safe level. If you cannot perform a safe landing because of damage you should eject. Both of these methods yield a higher score because you can save your self and/or your craft.

To successfully achieve ACE ranking you must also perform maneuvers that will earn top coverage ranking. These include flying under bridges and through hangars and gateways.

### **How to make ace:**

The game has been designed so that you are not required to play for rank. There is no time limit and you can refuel as many times as you wish but the fun by exploring the country.

#### **Examples**

Flying around the town in Mission #1

Burn the carrier at full throttle in Mission #2

Land on the carrier's hangar in Mission #3

Fly through the hangar at full throttle in Mission #4

# MISSIONS

There are four 10-mission scenarios, each requiring the F-16/A pilot to take off, perform a number of flying maneuvers, destroy targets, and finally successfully land the aircraft. In order to complete the ultimate task of TOP GUN, you must complete each mission. As always, Ontrack will run the task of ACOG and its variants.

## MISSION #1: THE TRAINING MISSION

The first mission is a training run through the China Lake Naval Weapons Station in the Mojave Desert.

Take off from Marine Naval Air Station in California (the actual Top Gun School). You must destroy a number of tank cluster ground targets that have been placed along the flight path, burst a hangar fly-around maneuver, and finally land on a simulated aircraft carrier landing strip painted on the desert floor. The landscape is that of a typical southwestern desert, complete with towering San R. mesas, dry sinks, roads, bridges and canyons.



= Canyon (high) Wall



= Water



= Helicopter



= Plane



= Road



= Fuel



= Tank



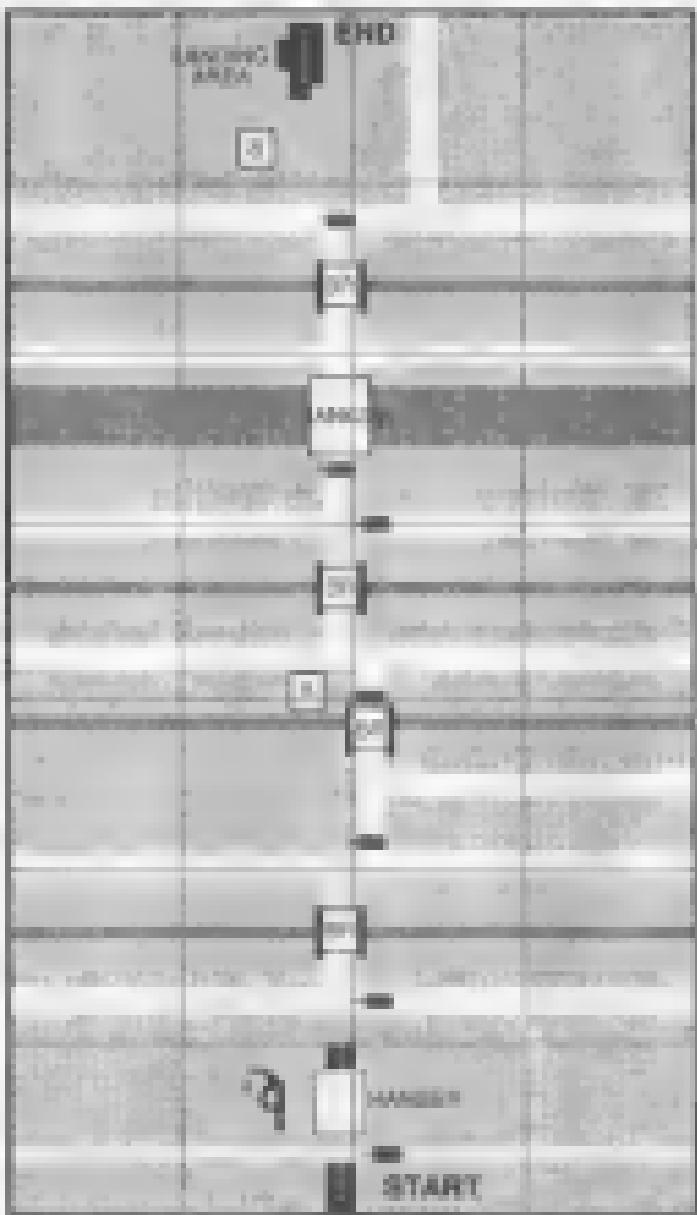
= Building



= Bridge



= Fueling Area



## MISSION #2: THE EUROPEAN MISSION

You are ordered into combat from a forward West German airbase to destroy Warsaw Pact forces advancing across the East-West border. After defeating all enemy ground and air forces, you must proceed east into the North Atlantic and attempt a dangerous carrier landing on the U.S.S. Enterprise.

If you execute the landing approach correctly with the proper Angle of Approach (AOA) to the carrier, maintain the proper landing speed and let the carrier deck at the right moment, the aircraft hook will catch the cable (a textbook landing). If not, you must try to decelerate with reverse thrust before reaching the end of the carrier deck.

After returning on the U.S.S. Enterprise, you must launch and pilot your F/A-18A to the hangar bay area to await further orders.

### Intelligence Report

#### Attitudes

USSO = 120.5

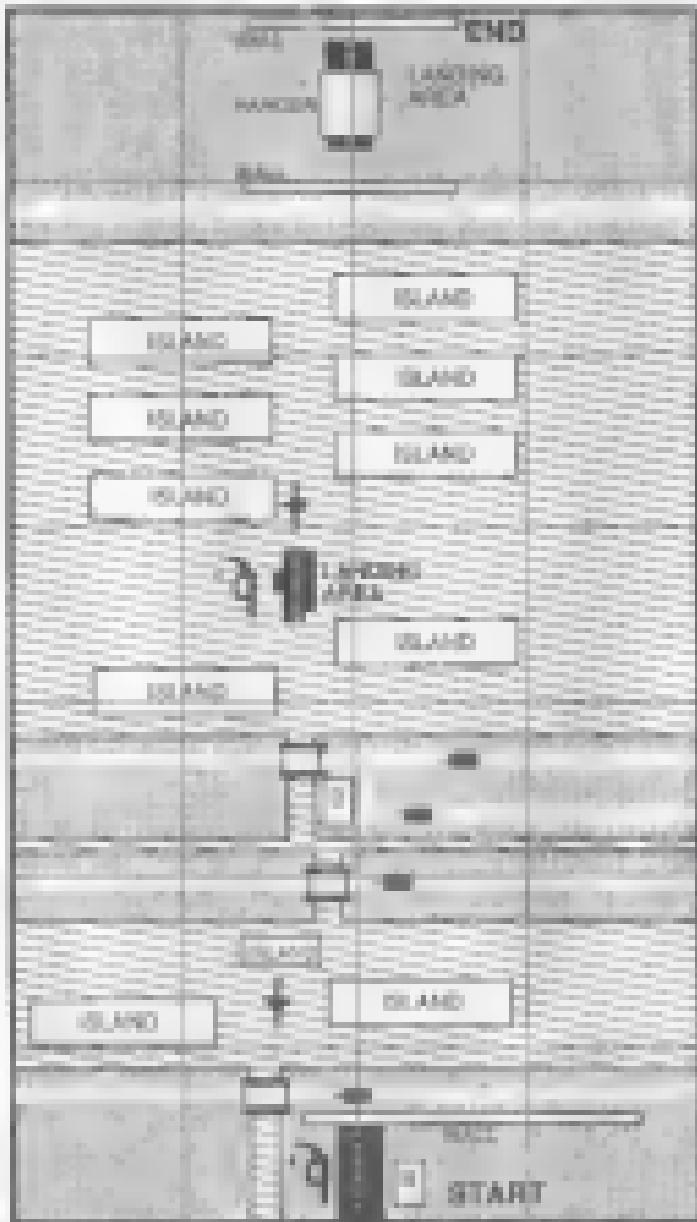
WPAF = 80.5

Hanger Ceiling = 120 ft.

Carrier Deck = 104 ft

Max. Altitude for

Decelerating Turn = 340 ft



## MISSION #9: THE CENTRAL AMERICAN MISSION

You receive orders to fly a resupply mission to drop badly needed equipment to allied forces at a jungle HQ. The mission starts with take-off through a river gorge toward allied HQ, evading enemy MiGs along the way. Careful timing and the proper altitude are required in order to achieve a successful drop. After refueling at the island landing zone, you head for another dangerous-vortex tracking over the U.S.S. Monitor en route to base.

Fly through the river gorge and under the bridge to enter higher mountain tracking.

### Intelligence Report

#### Affiliation:

Allied - 124 R

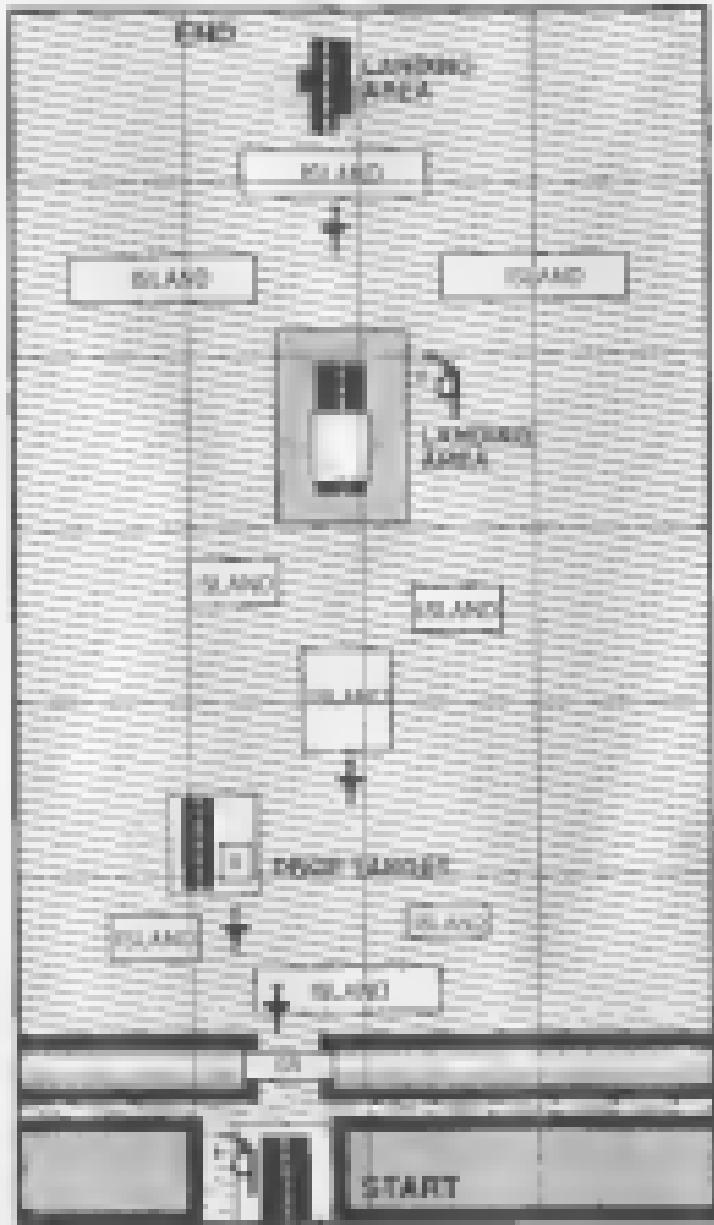
Center Brook - 124 R

Ringer Ceiling - 124 R

Altitude of  
Cliff-top Walls - 124 R.

Island Landing Area - 44 R.

Max Height to  
Drop Zone - 124 R.



## MISSION IN THE SOUTHEAST ASIA MISSION

The mission starts with a cockpit take off from the U.S. Marine (Impulsing 100% thrust power) which is patrolling on the international routes off the coast of Southeast Asia. Upon entering enemy helicopter along the way, you must bomb the enemy HQ and reach a refueling strip hidden in the jungle. After arriving, continue to the final destination at a forward jungle camp.

For key damage-making, fly under the gateway before bombing the enemy HQ.



END

LANDING  
AREA



LANDING  
AREA



ROBOTS TARGET

ROLL



START

Page 5

Mr. J. M. Bannister, the original mail purchaser of this radio gear, using and paying, paid \$100.00 for the gear-carriage which the Program is entitled to will be used to date to its arrival and ownership by Wrigley from the day of payment. Wrigley gave carriage because distance during that period, Atlantic Ocean, was sufficient to require it.

The recipient is entitled to receive delivery of the instrument presented until the entire gross amount due plus interest since the purchase date stated in full remittance certifying the delivery and a copy, well addressed, stamped envelope enclosing the original Letter of Acceptance, instrument, and two copies of this check, per each.

If your mileage falls after the end of the "Waiter" maturity period, you may choose to close the account, but at the address above will a check or money order for \$10.00 plus postage and handling be dated and a long self-addressed, stamped envelope.

We measured that *shuttle vector* is packaged stably and sent purified and contains empty bacterial plasmid. Polyethylene glycol (PEG) is the best biocompatible for regulating efficient transfection and the same was used for our other stable cell lines.

This community is funded from a grant originally supplied by National Endowment for the Arts and is open to all to the Program indicated in the schedule. This community will make known of its efforts to further through these performances, appreciation of the arts, enjoyment of personal growth and fun.

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